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APPLICATION NO.	FILING DATE	FIRST-NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,921	12/08/2003	Anthony A. Ruffa	82680	8399
23523	7590	06/30/2005		
NAVAL UNDERSEA WARFARE CENTER DIVISION NEWPORT 1176 HOWELL STREET, CODE 000C BLDG 112T NEWPORT, RI 02841			EXAMINER MOONEY, MICHAEL P	
			ART UNIT 2883	PAPER NUMBER

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/748,921

Applicant(s)

RUFFA, ANTHONY A.

Examiner

Michael P. Mooney

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 and 15 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 and 13 is/are rejected.
- 7) ☒ Claim(s) 6 and 10-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Stephens et al. (PG PUB 20050031343).

Stephens et al. teaches providing an input signal into an input optical fiber (fig. 5(c)) (see the single line entering the right side of the sub-band demultiplexer 28.sub.d); splitting said input signal (28.sub.d) to form a plurality of split input signals (see the lines leaving the left side of the sub-band demultiplexer 28.sub.d); amplifying at least one of said plurality of said split input signals with an amplifier to produce at least one output signal (see amplifiers 53); and outputting said at least one amplified split input signals through corresponding at least one output fiber (fig. 5(c)).

Thus claim 1 is met.

Stephens et al. teaches attenuating prior to said step of amplifying each of said plurality of said split input signals (see fixed or variable attenuators 55 in (fig. 5(c)).

Thus claim 2 is met.

Stephens et al. teaches wherein said amplifier is an erbium doped optical fiber pumped by a laser (paragraphs 0003, 0036). Thus claim 5 is met.

Claims 1, 7-9, 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kinoshita et al. (20030223104).

Kinoshita et al. teaches providing an input signal into an input optical fiber (see the single fiber entering 750 in fig. 14); splitting said input signal to form a plurality of split input signals; amplifying at least one of said plurality of said split input signals with an amplifier 758 to produce at least one output signal; and outputting said at least one amplified split input signals through corresponding at least one output fiber (see to the right of amplifiers 758 in fig. 14). Thus claim 1 is met.

The arrangement just described for Kinoshita fig. 14 inherently teaches simultaneously switching said signals at multiple frequencies from a single input fiber to at least two output fibers. Thus claim 7 is met.

Futhermore, arrangement just described for Kinoshita fig. 14 inherently teaches each and every element of claim 8. Thus claim 8 is met.

Each and every element of claim 9 is taught by Kinoshita et al. figure 14. Thus claim 9 is met.

Each and every element of claim 13 is taught by Kinoshita et al. figure 14. Thus claim 13 is met.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephens et al. (PG PUB 20050031343).

Stephens et al. teaches providing an input signal into an input optical fiber (fig. 5(c)) (see the single line entering the right side of the sub-band demultiplexer 28.sub.d); splitting said input signal (28.sub.d) to form a plurality of split input signals (see the lines leaving the left side of the sub-band demultiplexer 28.sub.d); amplifying at least one of said plurality of said split input signals with an amplifier to produce at least one output signal (see amplifiers 53); and outputting said at least one amplified split input signals through corresponding at least one output fiber (fig. 5(c)).

Stephens et al. teaches attenuating prior to said step of amplifying each of said plurality of said split input signals (see fixed or variable attenuators 55 in (fig. 5(c))).

Although Stephens et al. does not expressly state "wherein attenuating each of said plurality of said split input signals comprises filtering said split input signals" it would have been obvious to do so because it is notoriously well known that attenuators used in configurations such as fig. 5(c) are filter devices. Thus claim 3 is rejected.

Regarding claims 4, this claim is rendered obvious by the reasons and references given above and the fact that it is conventional to use partially opaque fibers as attenuators. Thus claim 4 is rejected.

Allowable Subject Matter

Claims 14-15 are allowed.

The prior art, either alone or in combination, does not disclose or render obvious a third splitter joined to said first splitter cancellation processing output having a plurality of outputs corresponding to each said adder; wherein a first path is defined from said first splitter main output through said second splitter, said at least one amplifier to said adder signal input; and a second path is defined from said first splitter through said third splitter to said adder cancellation input; said first path differing from said second path by one-half wavelength of the input signal in combination with the rest of claim 14.

It is noted that the claim 14 is allowable because the unique combination of each and every specific element stated in the claim.

Claims 6, 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The prior art, either alone or in combination, does not disclose or render obvious the unique combination of each and every specific element stated in each of respective claims 6, 10.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-

1562.


Michael P. Mooney
Examiner
Art Unit 2883



Frank G. Font
Supervisory Patent Examiner
Art Unit 2883

FGF/mpm
6/18/05